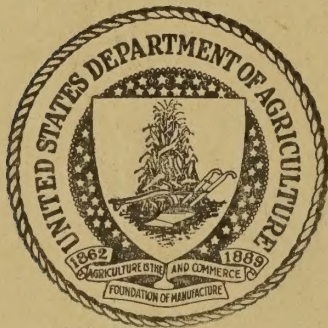


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UNITED STATES DEPARTMENT OF AGRICULTURE  
Rural Electrification Administration  
Washington, D. C.

May 12, 1950

\* RATES FOR RANGES AND WATER HEATERS \*

From time to time we receive requests from the field for separate rates for electric ranges and water heaters. We generally recommend separate rates for water heaters, but on the other hand, we have never recommended separate rates for ranges. Our reasons are as follows.

As a general principle, it is best to make a single rate available for all types of farm and home usage. Years ago, it was customary for power companies to make different rates available for lighting, refrigeration, cooking, etc., but this practice has long since been discarded in favor of a single all purpose rate. The only recommended exception to the all purpose rate is a separate rate block for water heating.

A separate rate is usually necessary for water heating because at ordinary rate levels the large kwh consumption (250 kwh per month for the average household water heater) makes the monthly electric bills too high to encourage the use of electric water heaters. Fortunately, the cost per kwh of serving storage type electric water heaters is exceptionally low because of their extremely good load factor.

In comparison with water heaters, electric ranges have a poor load factor, coupled with on-peak characteristics. Therefore, the cost per kwh of furnishing service to electric ranges is higher.

It is generally considered that economical operation of electric ranges can be had provided the cost of electricity does not exceed 3.0¢ per kwh. This figure will vary, of course, but there are special advantages of electric cookery which tend to encourage its use.

The all purpose rate is therefore so designed as to enable range load to be developed. To accomplish this, we design all farm and home rates with blocks which reach a price of not over 3.0¢ per kwh for usages in excess of 80 kwh per month (or thereabouts). In estimating the revenues of REA systems, it is anticipated that range load will be obtained at the regular rate and it might therefore impair payout to offer a separate rate. It would certainly be a mistake to offer the water heating rate for ranges because that would result in service at a loss.

On the other hand, it is generally considered that economical service cannot be obtained from electric water heaters when the cost of electricity exceeds 1.5¢ per kwh and in some cases unless the rate is as low as 1.0¢ per kwh.. Therefore as a practical matter, a separate rate for water heating is usually necessary to make electric water heating economical.



We believe that it is important to offer a rate of 1.5¢ or less for water heating wherever the cost of wholesale power permits. When water can be heated at a reasonable cost with electricity this, together with the many other advantages of electric cooking and heating, will tend to encourage the full utilization of electricity on the farm and in the home.





